

REMARKS

Claims 14, 20 and 26 have been amended, claims 42 to 44 have been added and claims 1 to 13, the non-elected claims, have been canceled. Claims 14 to 44 are now active in this application.

Claims 14 to 18, 20 to 24, 26 to 28, 32 and 36 were rejected under 35 U.S.C. 102(b) as being anticipated by Yalvac et al. (U.S. 5,310,526). The rejection is respectfully traversed.

Prior to discussing the claims specifically, it is noted that Yalvac et al. relates to an entirely different device from that of the subject application. In Yalvac et al. a light source is passed through an analyte and detected after passing through. It is therefore the intent in Yalvac et al. that the analyte being sensed be homogeneous in order to provide an accurate determination of the property being sensed for the analyte. This is not the purpose of the present invention. In the present invention, it is necessary that the analyte be in fluid contact with the sensor surface and the purpose of the agitation is therefore to cause the analyte to travel to the sensor surface. No such feature is taught or even remotely contemplated by Yalvac et al. In Yalvac et al. the analyte is never in communication with the sensor surface.

In view of the above and with reference to claim 14, this claim requires, among other features, a fluid compartment for retaining therein an analyte, said fluid compartment in fluid communication with the biosensor. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 14 further requires a miniature electro-mechanical vibration device configured to vigorously shake the fluid compartment to enhance mass transport of analyte to the sensor surface. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claims 15 to 18 depend from claim 14 and therefore define patentably over Yalvac et al. for at least the reasons stated above with reference to claim 14.

In addition, claim 15 further limits claim 14 by requiring that the miniature electro-mechanical vibration device be further configured to vigorously agitate the contents of the fluid compartment. No such feature is taught or suggested by Yalvac et al. in the combination as claimed.

Claim 16 further limits claim 14 by requiring that the fluid compartment be configured to receive a liquid sample having an analyte suspended or dissolved therein, and further that the vibration device be configured to vigorously agitate the fluid compartment to cause an analyte suspended or dissolved in the liquid sample to accelerate the mass transport of analyte beyond that available in the absence of agitation. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 17 further limits claim 14 by requiring that the biosensor comprise an optically based miniaturized sensor. No such feature is taught or suggested by Yalvac et al. in the combination as claimed.

Claim 18 further limits claim 14 by requiring that the fluid compartment comprise a fluid chamber and a lid configured to open and close such that a liquid or solid sample

having a first analyte suspended therein can be sealed within the chamber. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 20 requires, among other features, a fluid compartment for retaining therein an analyte, the fluid compartment in fluid communication with the bio-sensor. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 20 further requires a miniature electro-mechanical vibration device configured to vigorously shake the biosensor to enhance mass transport of analyte to the sensor surface. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claims 21 to 24 depend from claim 20 and therefore define patentably over Yalvac et al. for at least the reasons presented above with reference to claim 20.

Claim 21 further limits claim 20 by requiring that the miniature electro-mechanical vibration device be further configured to vigorously shake the fluid compartment. No such feature is taught or suggested by Yalvac et al. in the combination as claimed.

Claim 22 further limits claim 20 by requiring that the fluid compartment be configured to receive a liquid sample having an analyte suspended or dissolved therein, and that the vibration device be configured to vigorously shake the fluid compartment to cause the analyte suspended or dissolved in the liquid sample to accelerate the mass transport of analyte beyond that available in the absence of agitation. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 23 further limits claim 20 by requiring that the biosensor comprise an optically based miniaturized sensor. No such feature is taught or suggested by Yalvac et al. in the combination as claimed.

Claim 24 further limits claim 20 by requiring that the fluid compartment comprises a fluid chamber and a lid configured to open and close access to the fluid chamber such that a liquid or solid sample having a first analyte suspended therein can be sealed within the chamber. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 26 requires, among other features, a sample compartment configured to receive a sample having an analyte suspended therein in fluid communication with the biosensor. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 26 further requires a miniature electro-mechanical vibration device configured to vigorously shake the sample compartment to cause a desired portion of the analyte to contact the sensing surface of the biosensor. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claims 27, 28, 32 and 36 depend from claim 26 and therefore define patentably over Yalvac et al. for at least the reasons presented above with reference to claim 26.

In addition, claim 27 further limits claim 26 by requiring that the biosensor comprise an optically based miniaturized sensor. No such feature is taught or suggested by Yalvac et al. in the combination as claimed.

Claim 28 further limits claim 26 by requiring a sealing element configured to selectively seal the sample compartment. No such feature is taught or suggested by Yalvac et al. in the combination as claimed.

Claim 32 further limits claim 26 by requiring that the sample comprise at least one form selected from the group consisting of a liquid and a solid. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 36 further limits claim 26 by requiring that the sample compartment be configured to receive a liquid sample having an analyte suspended or dissolved therein, and that the vibration device be configured to vigorously shake the sample compartment to cause the analyte suspended or dissolved in the liquid sample to accelerate the mass transport of analyte beyond that available in the absence of agitation. No such feature is taught or suggested by Yalvac et al. either alone or in the combination as claimed.

Claim 20 was rejected under 35 U.S.C. 102(b) as being anticipated by Kawana et al. (U.S. 4,956,149). The rejection is respectfully traversed.

Claim 20 requires, among other features, a fluid compartment for retaining therein an analyte, the fluid compartment in fluid communication with the bio-sensor. No such feature is taught or suggested by Kawana et al. either alone or in the combination as claimed.

Claim 20 further requires a miniature electro-mechanical vibration device configured to vigorously shake the biosensor to enhance mass transport of analyte to the sensor surface. No such feature is taught or suggested by Kawana et al. either alone or in the combination as claimed.

Claims 37 to 41 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kalvac et al. in view of Sunshine (U.S. 6,085,576). The rejection is respectfully traversed.

Claims 37 to 41 depend directly or indirectly from claim 26 and therefore define patentably over the applied references since Sunshine fails to overcome the deficiencies noted above with reference to Yalvac et al.

In addition, claim 37 further limits claim 26 by requiring a data processing device, a data input device in communication with the data processing device, an algorithmic software directing the data processing device and a data storage unit, wherein discrete analyte data associated with a sample contained within the sample compartment is stored and supplied to the data processing device such that the data processing device, directed by the algorithmic software, will automatically determine bioanalytical data associated with the sample, wherein predetermined parameters associated with the bioanalytical data are determined via the data input device. No such features are taught or suggested by Yalvac et al., Sunshine or any proper combination of these references either alone or in the combination as claimed.

Claim 38 further limits claim 37 by requiring that the data processing device be a digital signal processor. No such features are taught or suggested by Yalvac et al., Sunshine or any proper combination of these references in the combination as claimed.

Claim 39 further limits claim 37 by requiring that the data input device be a keypad. No such features are taught or suggested by Yalvac et al., Sunshine or any proper combination of these references in the combination as claimed.

Claim 40 further limits claim 26 by requiring means for transmitting and receiving data via a wireless communications link. No such features are taught or suggested by Yalvac et al., Sunshine or any proper combination of these references in the combination as claimed.

Claim 41 further limits claim 40 by requiring that the means for transmitting and receiving data comprise a radio frequency receiver and a radio frequency transmitter. No such features are taught or suggested by Yalvac et al., Sunshine or any proper combination of these references or in the combination as claimed.

Claim 42 further limits claim 14 by requiring that the biosensor be a surface plasmon resonance sensor. No such features are taught or suggested by Yalvac et al., Sunshine or any proper combination of these references either alone or in the combination as claimed.

Claim 43 further limits claim 20 by requiring that the biosensor be a surface plasmon resonance sensor. No such features are taught or suggested by Yalvac et al., Kawana et al. or any proper combination of these references either alone or in the combination as claimed.

Claim 44 further limits claim 26 by requiring that the biosensor be a surface plasmon resonance sensor. No such features are taught or suggested by Yalvac et al., Sunshine or any proper combination of these references either alone or in the combination as claimed.

In view of the above remarks, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,



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